

Recent developments in the data analysis integrated software system of HEPs (Remote presentation)

Recent advances of X-ray beamline technologies, including the high brilliance beamlines at next-generation synchrotron sources and advanced detector instrumentation, have led to an exponential increase in the speed of data collection. As a consequence, there is an increasing need for a data analysis platform that can refine and optimize data collection strategies online and effectively analyze large volume data after the data collection. Data analysis integrated software system (Daisy) has been designed to address the requirements of the next-generation advanced Synchrotron radiation source, such as the High Energy Photon Source (HEPS). Daisy aims to support on-site data analysis services with fast feedback and interaction, and offline analysis of large-scale data.

We provide an update on recent developments in the Daisy framework as well as on the custom application for specific scientific areas developed based on Daisy. This involves a general-purpose graphical user interface for visualization of raw or processed data, a web-based interactive computing platform for remote access, a web-based application for micro and nano computed tomography, the data-processing pipeline for biological macromolecular crystallography beamlines based on artificial intelligence, PDF data-processing pipeline for X-Ray Diffraction beamlines, spectral analysis application for X-ray absorption fine structure beamlines. The future developments of Daisy are also discussed.

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